



## MARK-UP COPY OF AMENDED CLAIMS

- 1 11. **(AMENDED)** A method of designing a roller cone drill bit, the  
2 steps of comprising:  
3 (a) calculating the force balance conditions of a bit;  
4 (b) defining design variables;  
5 (c) determine lower and upper bounds for the design variables;  
6 (d) defining objective functions mathmatically as a function of said  
7 design variables;  
8 (e) defining constraint functions mathmatically as a function of said  
9 design variables;  
10 (f) performing an optimization means; and,  
11 (g) evaluating an optimized cutting structure by modeling.

Please cancel Claims 1-10 and 12-13.

09/833,016-052701

[illegible]